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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,553	01/13/2006	Kimmo Hytonen	0837-0192PUS1	1876
77032	7590	05/01/2008	EXAMINER	
Joe McKinney Muncy PO Box 1364 Fairfax, VA 22038-1364			BRAHAN, THOMAS J	
			ART UNIT	PAPER NUMBER
			3654	
			MAIL DATE	DELIVERY MODE
			05/01/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/564,553

**Applicant(s)**

HYTONEN, KIMMO

**Examiner**

Thomas J. Brahan

**Art Unit**

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.
2. Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example;
  - a. In claim 1, line 13, the term "the distance (s)" lacks antecedent basis within the claim.
  - b. In claim 1, lines 16, 18, the limitation "i.e. the velocity...." fails to positively recite the claimed invention, due to the term "i.e.".
  - c. In claim 1, line 12, the term "each sequence" is not understood. The term sequence does not seem to apply to the acceleration sequences recited in the claim.
  - d. In claim 1, line 13, the term "at each time" is not understood. It implies that there is a basis in the claim for plural "times". Is the definition time from line 12 also being incorporated into the delayed actions?
  - e. In claim 1, line 19, the term "distance (s2)" renders the claims indefinite, as the "s2" portion of the term fails to distinguish this distance over the distance (s) of line 13, as claim terms in parenthesis are reference numerals which are only explanatory. Note that the term "stopping distance (s1)" in line 11 does not have this problem, as the term "stopping" distinguishes this distance from the others.
  - f. The last eight lines of claim one are not fully understood. The beginning of the claim makes no mention of a desire to stop the crane drive and appears to be reciting a general control system which handles new velocity requests. The last eight lines somehow makes the jump to a manner of braking the crane drive. Is the entire claim drawn to a general control method, as indicated by the beginning of the claim, or just to a braking method, as indicated by the end of the claim?
  - g. Claim 2 is indefinite as it introduces "a distance (s3)" into the claimed method when the "(s3)" portion of the term cannot be used to distinguish it from the other distances.
  - h. Claim 3 is awkward as it begins "wherein placing the storages in a two-element table" as to indicate that this is a step which is already in the claims when this is a new step.
3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-3, as best understood, are rejected under 35 U.S.C. § 103 as being unpatentable over Hytönen (U.S. Patent No. 5,529,193). Hytönen '193 shows the basic claimed method for controlling a crane which includes comparing a new velocity request to a previous velocity request and forming and storing acceleration sequences. Changes in velocity based on the stored accelerations are added for each given time and the sum of the velocity changes is added to the previous velocity request to form a new control command, see the Abstract. Hytönen '193 varies from the claims by not having a control algorithmic formula that performs delayed portions of the control command. However formulas, mathematical expressions of scientific principles, have been held by the courts in themselves to not constitute patentable invention, only the structure resulting from their application. See Mackay Radio and Telegraph Co. v. Radio Corporation of America, 306 U.S. 86, 94; 40 USPQ 199, 202. The novelty of a mathematical formula is not a determining factor at all. Whether the algorithm was in fact known or unknown at the time of the claimed invention; it is one of the "basic tools of the scientific and technological work", and it is treated as though it were a familiar part of the prior art. See Parker v. Flook, 437 U.S. 584, 198 USPQ 193, 198 and Gotschalk v. Benson, 409 U.S. 67, 175 USPQ 674. Therefore, it would have been obvious to one of ordinary skill in the art to use the mathematical formula recited in the claims for negative acceleration velocity requests (braking) with the related method of Hytönen '193, as such algorithms are considered as known prior art.

5. Applicant's remarks in the amendment filed January 10, 2008, have been fully considered and the amendments to the claims have overcome some the language problems with the claims, but they are still indefinite, for the examples given above. Although not fully understood, a prior art rejection for the claims has been included above. The amendment necessitated the new grounds, accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. An inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Brahan whose telephone number is (571) 272-6921. The examiner's supervisor, Mr. Peter Cuomo, can be reached at (571) 272-6856. The fax number for all patent applications is (571) 273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more

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information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions regarding access to the Private PAIR system, should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thomas J. Brahan/

Primary Examiner, Art Unit 3654